

AVIATION WEEK

MAY 3, 1948

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Our First Tires

went on sled runners!

When it comes to experience in designing better airplane tires, Goodyear's aptitude goes back to the very beginning. Airplanes were still landing on "sled runner" skids when Goodyear pioneered the first pneumatic tire for aircraft in 1909. Some of the first Goodyear-tired wheels were mounted on these skids, for lack of better landing gear.

Since then Goodyear has led the way in landing wheel advances that have con-

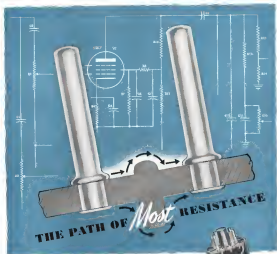
tributed greatly to the safety and progress of aviation: the modern low-pressure tire, the Ice Grip tire, the Dual-Seal tube, Multiple and Single Disc Brakes, magnesium-alloy wheels and many other improvements in general use today. That is why Goodyear Aviation Products are first choice of airmen the world around. Goodyear, Aviation Products Division, Akron 16, Ohio or Los Angeles 54, California.



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MORE AIRCRAFT LAND ON GOODYEAR

TIRES TH



At high altitudes, ordinary electron tubes can develop electrical "leak" between the base pins. Honeywell recognized this threat as a vulnerable point in dependable aircraft operation—and did something about it! We designed a special tube base with barrier between pins, leak shields and outside the base, to create a longer "leakage path"—adequate for higher altitudes, a feature of the Honeywell electronic Fuel Gauge.

Tube-supplier Raytheon and Avionics Electronics Laboratory accepted every requirement for dependable performance in repeated tests and again in every Honeywell commercial model. It's another reason why Honeywell controls always promote improved efficiency—and are recognized for their reliability. Minneapolis-Honeywell, Minneapolis 8, Minn. In Canada: Toronto 11, Ontario.



ASBESTOS CLOTH—for use wherever cloth insulation is required. Various grades give desired heat resistance and meet other operating conditions.

ASBESTOS TUBING—the best in commercial asbestos tubing of asbestos yarn braided wire flexible tubing—available in a wide range of diameters.

ASBESTOS TAPES—provide an ideal shield in construction for parts such as wiring, etc. Transited in a wide variety of styles, grades and dimensions.

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Use Fire and Flame Resistant J-M ASBESTOS TEXTILES

The sheet forms of Johns-Manville Asbestos Textiles have helped in helping to make aircraft safer in many ways. Designers use these versatile asbestos materials in fire shields—on board electrical installations—on fans, wherever there is need for a textile that combines fire safety with strength, flexibility and durability.

Producers of quality asbestos textiles for more than 60 years, Johns-Manville makes its own asbestos...

...cuts and spins the fibres into yarn which are woven into cloth, tubing and tapes of many grades and dimensions. J-M Textiles are also available treated with flameproof synthetic compounds.

For help in selecting the proper type and grade of J-M Asbestos Textiles for your design, ask for Brochure AV-14. If you have a special problem, our engineers will be glad to work with you. Write Johns-Manville, Box 253, New York 16, N. Y.

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This special Pacific Western turbojet engine develops approximately 30,000 lbs. of thrust at normal propeller speed.

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TURBOJET
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GEAR BOX**

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Pacific Western aircraft products are found in all types of aviation applications—in testing laboratories, on ground simulators, in modern airplanes and in the planes that build them. Why not make use of our 50 years of experience, and the finest manufacturing facilities in the West?

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A new Pacific Western aircraft equipment catalog is now available. Write for a copy to your company letterhead now.

Write, wire, or phone our Los Angeles plant for further information, or if you prefer, get in touch with your nearest Pacific Western office.



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YEARS

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GEAR PRODUCTS

NEWS DIGEST

DOMESTIC

Irving B. Babcock resigned as president of Avco Manufacturing Corp. on physician's advice. He will continue in a board capacity. Victor F. Foster, board chairman, will assume the duties of president.

Naval Avionics will celebrate its 17th anniversary May 8 commencing the signing of the first contract for naval aircraft, two Grumman hydroplanes, in May 8, 1911.

Air Line Pilots Association's membership reportedly has endorsed a proposal to accept all jetliner lines established by pilots and mechanics striking against National Airlines. If implemented, the policy could cripple all scheduled airline operations at Miami, Newark, New Orleans and other ports served by NAL, which now operates almost complete automation of service despite weather.

United Air Lines and Matson Navigation Co. have signed a pact to stimulate aviation as an export between the West Coast and Hawaii. Both companies will sell tickets providing for one-way passage via plane and one-way via ship.

Post Office Department has authorized and ordered air mail service between the U. S. and the Americas and British zones in Germany effective May 1.

FINANCIAL

Solar Aircraft Co. declared year-end dividend of 15 cents per share.

Philippine Air Lines reported gross income \$4,975,368 for 1947, 97 percent more than the 1946 total of \$4,410,335.

International Detroit Corp. announced net profit for 1947 of \$4,379,119 or \$1.17 per share on sales totaling \$71,682,179.49.

Fairchild Camera and Instrument Corp. reports net income for 1947 of \$465,477 or \$1.38 per share on sales amounting to \$3,321,300.

FOREIGN

KLM last week was actively on ordering abandonment of its services into Berlin because of Russian headquarters.

Pan American Airways has reduced fares up to 25 percent on Pan East routes from Manila to Hongkong and Bangkok.

Nasipac will move its first jet aircraft from the Everett, Ltd. Four "Nasipac III" fighters will be delivered to the Royal New Guinea Air Force within the next two months.

Black light test...

**One of hundreds
of inspections to
insure JANITROL
dependability**



Every Janitrol Aircraft Heater is inspected by the "black light" or fluorescent penetrant process that indicates the most minute flow in construction.



Janitrol form heater widely used for converting present DCS heating systems.



Janitrol

AIRCRAFT-AUTOMOTIVE DIVISION • SURFACE COMBUSTION CORPORATION, TULSA, OKLA.

AIRCRAFT and AUTOMOTIVE HEATERS
with the whirling flame

owners and persons financially interested in the contractor's business, whether or not the above persons are directly or indirectly designated as beneficiaries.

13. Federal and state income and excess profits tax.

14. Bond discount or financing charges.

15. Third and expense on loans and transfers of capital assets and bonds.

16. Bond debt issues or charges to interest thereon.

17. Inter-company profits. Such profit will be allocated in transactions between parent and wholly owned subsidiaries unless otherwise provided for in this contract (hereinafter, "qualifying interests will be treated as determining wholly-owned subsidiaries"). Intercompany profit payable between parent and subsidiaries other than wholly owned will be allocated only when approved by the contracting officer.

18. Inter-company profits. As used herein, inter-company profits means profits between direct subsidiaries, but not subsidiaries of a mother corporation.

► **Allocable Costs**—Allocable under the new-style contract will be direct and indirect manufacturing costs, administrative, selling, and distribution expenses, which are reflected by the contractor's books and records as "incurred and reasonably necessary." Determination of allocability will be based on generally accepted commercial accounting principles, consistently applied in the contractor's own accepted accounting system.

The new regulations set out 16 categories of allocable costs: (1) personal depreciation of fixed assets; (2) depletion of natural resources; (3) bond service charges; (4) employee group pension and retirement expenses (which are generally accepted by the contracting officer); (5) employee welfare expenses; (6) employee's vacation pay (if established policy); (7) royalties and license fees; (8) legal, accounting and other professional fees for services rendered, unless based on reasonable rates for matters arising in fiscal periods not covered by the contract; (9) administrative expenses (when approved); (10) interest (when approved); (11) personnel costs for performance bonuses; (12) necessary management expenses such as corporate director's and executive committee fees, expenses of stockholders' meetings and annual meetings; (13) amortization of stock, patents and special tools; (14) amortization of dies, patterns and special tools; (15) "reasonable" salaries or other compensation to officers, proprietors and supervisory officers; (16) pension, profit sharing, expenses, including compensation of officers, directors and other officers and members of governing bodies.

personnel; (17) salaries and benefits; (18) expenses of (provided for in this contract); (19) expenses incurred in the operation of the contract (if specified in the contract).

► **Revised Methods**—Methods of determining allocable costs at a parent or a subcontractor are also being revised. The new methods, although not yet in final form, will base the determination on the degree of "business support" rather than cost and product, as has been the case. The object here is to bring the subcontractor under the new policy, as applied, to the prime contractor, and to facilitate the transfer of instructions to the prime contractor's production record.

Price negotiation procedures, which in the past were not readily applied

February Shipments Total 613 Planes

Shipment of 613 new planes in February, by manufacturers, included 452 personal planes, 16 transports and 147 military planes, showing a slight increase over January shipments of 607 planes.

The Department of Commerce, however, and comparative figures showed that the first two months of 1946 were well below those of the first two months of 1947. (223) planes were shipped in 1947.

Analysis indicated that the personal plane slump was responsible for most of the drop, and that actually the employment level in aircraft plants was only 5 per cent lower in Feb. 1946 than in Feb. 1947.

Combined aircraft weight of 381,930 lb. was reported for the 466 new planes shipped in Feb. 1946, valued at \$5,166,000. Increase of 11 per cent in value and 25 per cent in weight over the preceding month's figures was shown.

Aircraft shipment dropped in February to 607, 1,000 net engines with value of \$5,800,000 and 157 military planes with value of \$17,800,000. Gains were shown in both classifications over January shipments which were 775 civil engines with \$1,199,300 value and 207 military engines with \$15,500,000 value.

Exports of complete aircraft and engines for February amounted to 109 planes and 175 engines with total value of \$5,800,000. Shipments in January total of 117 planes, 255 engines, and \$4,800,000 value.

Employment in aircraft plants was up slightly to 148,295 in February from 147,548 in January, while total plant employment showed an almost negligible increase to 32,934 from 32,921. Compared to February 1947 employment figures of 161,612 for aircraft plants and 34,642 for engine plants, the February 1948 figures still showed a marked decrease, reflecting the smaller production figures.

Foreign Entries Accepted

Results: Transcontinental Air Lines this year will accept foreign airlines for the first time.

L. E. Thorburn, chairman of the British Air Committee, made the announcement at Los Angeles last week.

To qualify, foreign planes and pilots will be required to certify to National Aeronautics Association their aviation status and degree of government approval.

Start of the flights has been set for Sept. 4 for both metropolitan and jet classes.



E-70, pulled from storage, roll off manufacturing line at Boeing Wichita plant.

Congress Scorns "Mothball" Plan

Forrestal tries compromise with T-Group advocates by proposing to enlarge Air Force with steered craft.

The fight for air power continued on Capitol Hill last week as Air Force officials standing pat for their T-Group program while Defense Secretary James V. Forrestal argued the Transatlantic Airlines route to 68 Congress.

Forrestal's proposal was a rare, at least to appear more like of Congress criticism of administration effort to limit the Air Force to 35 Groups and 31,481,180,000 in passenger funds. He urged creation of 19 new bomber groups by taking Boeing B-29 out of storage and adding another fighter group from World War II surplus planes. Forrestal admitted that the Air Force did not yet know whether the storage planes would be workable.

His proposal did not add up procurement funds to previous Administration offers. ■ **Mothball Air Force**—The 66-Group proposal was derided by Congressional advocates of air power as the "mothball" first line of defense as a "mothball" air force and dangerous waste of the State's wealth, outside the previous record of the House and Senate. T-Group program and \$2,395,000,000 for new plane procurement.

In group members, the 66-Group program would involve only two less fighter bomber groups and two less troop carrier group than the T-Group program. In testimony before the Senate Appropriations Committee, Forrestal stated in case for the 66-Group program as the overall domestic capacity of the country. A national defense program, the surviving base with the 66 Air Groups and engineering ground and aerial forces "for balance," he continued Congress would maintain placing the country on a war footing with plenty

would be \$5,940,000,000 in cash and contract authorization, or more than double the \$2,162,792,000 now authorized. This would be increased to \$4,900,000,000 in the 1950 fiscal year.

In response, the Air Force would be the widest source. Under the Forrestal budget program, the Air Force would be \$5,940,000,000 in cash and contract authorization, or more than double the \$2,162,792,000 now authorized. This would be increased to \$4,900,000,000 in the 1950 fiscal year.

Forrestal pointed the way for more aircraft at a later date of the \$22,490,000,000 air defense program, including a T-Group Air Force program, during his appearance before the Senate committee, asserting that he is "now staying at it."

Senators' anger with the Defense Secretary over the availability of long range aircraft procurement. Forrestal for applied the action of the House in making \$432,000,000 for aircraft procurement available for the 1949 and 1950 fiscal years as "a means of the 'double' of long-range planning. Later, Forrestal opposed appropriations of the sum "at this time" during it would prove the greatest out of balance through over-optimism on the air defense program, but the availability of the appropriated Air Force funds if it were not deemed advisable, New Hampshire's C. H. Styles (R) urged Forrestal to say he was being objected to having the funds available. Forrestal's reply was that "the pressure" to spend the appropriated funds "would be too great" and that, therefore, Congress should be "approached" with the recommendation that funds be made available for long-range planning.

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Personal Plane Exports

Twelve personal aircraft companies reported in March, 47 aircraft valued at \$127,611, it was announced by the Aircraft Industries Association. The total value of 173 aircraft valued at \$1,977,000, or 97 percent of dollar value for these companies, as compared with 46 planes, or 104 percent of all production, valued at \$1,000,000 for the previous month. That was a 1.8 percent of total output.

Current exports were 47 aircraft, which showed 11 aircraft valued at \$67,624. Export also had January and February shipments, showing 13 aircraft valued at \$62,023 for January and 11 aircraft valued at \$55,033 for February.

Canada was second greatest importer for March, receiving new aircraft valued at \$12,040.

Other sales, for Mexico, for France, for France, two, Paraguay, two, South Africa, two, and Argentina, Guatemala, Haiti, Portugal, Uruguay and Venezuela, one each.



FICKET LINES both up work on USAF and commercial orders



at the union's Harold Gibson and company's A. J. Logan for the union

Strike at Boeing Halts Production

Long dispute likely as company appeals to international body, and expresses hope of getting unbreakable contract.

A strike at the Seattle plant of Boeing Airplane Co. has halted work on one of the industry's largest military and commercial backlog and delayed delivery on two of the Air Force's prime future weapons, the B-50 and B-47 bombers.

Unless the government can induce or force arbitration, the strike of 14,800 members of Local 751 of the International Mechanical Union appears likely to be a long one. The strikers at mid-week, however, held two possibilities for rapid developments.

The company feared its separate twist of the executive council of the International Association of Machinists, Local 771's parent body.

In Washington, the headquarters of IAM announced the strike was not approved by the IAM executive council which, under the IAM constitution, must okay strikes by any local lodge.

Failure to obtain such approval results in forfeiture of all rights to strike decisions or to settle financial aid.

► **Company View**—The company, represented by A. J. Logan, industrial relations director, takes the attitude that Local 751 repudiated itself over its collective bargaining agreement by "causing and maintaining" a strike when the contract had a no-strike clause.

Boeing went over the head of the local, according to a company spokesman, to "establish a sound relationship with our employees on which we can depend on." "We are hopeful that out of this strike will come an agreement on which we can rely—one which both sides can live with."

"We think the case is so important that we are ready to spend some time straightening it out. That is more important than getting the strike over in a day's time."

► **Union View**—Douglas Logan's partner, a Harold Gibson, union president. The union holds that it has fulfilled its obligations under the old contract by negotiating and proposing strikers and that the work stoppage therefore could not be "concocted or classified as a violation of an agreement."

The Aero Mechanics newspaper notes that the strike is the most of kind and desperate attempt of the local to settle second round wage negotiations begun 18 months ago. It accuses Boeing of "arrogance" in refusing to arbitrate three issues in dispute: seniority, security, and hours.

► **The Issues**—The union, whose last pay increase was in March, 1946, is asking a 10-cent-an-hour general wage increase, eight paid holidays and the resumption of a senior security plan. The company has offered an increase of 15 cents, but wants the seniority clause modified.

The company contends the seniority clause in the old contract makes it difficult to transfer employees from one shop to another. The union contends that giving the company the right to transfer employees would make it possible to switch the employee to a less desirable job.

The present trouble dates back to the spring of last year, when negotiations resulted in a company offer to increase wages and grant paid holidays equivalent to 80 cents an hour. The union rejected the offer and authorized a strike but IAM refused strike action, according to the company, as the ground that a strike would have been a direct violation of the contract.

There was no evidence in Washington that IAM President Harvey W. Brown has approved the present strike. The IAM constitution provides that the president may authorize an emergency strike in extreme cases involving wage cuts or increased hours of work where delay would "seriously jeopardize" the welfare of employees.

► **The Effects**—The strike is the first in Boeing's 12-year history, and its effects are both immediate and long-range. • **B-50, Struck**—The first Air America Army, Army Air Corps and other aircraft, and B-50s being built by the USAF will be delayed.

► **Union members** struck also at Moses Lake where the B-47 is being tested, and at Alhambra, N. M., where Boeing's profile rifle project is located.

► **Boeing has** flown three Struckdowns to Wichita to continue testing. • **A pending** Federal outlook for 1945 may be changed by the strike and consequent delay in delivery. In 1947, Boeing had a net loss of \$444,497. But it has been making certification turning on the Struckdown and hoped to deliver a substantial number of the 55 in order this year.

Helicopter Progress Is Revealed

Prices rising despite more military procurement and commercial sales, Helicopter Society forum told.

By ROBERT McLAUREN

PHILADELPHIA—Increasing multiplicity of the helicopter, both as a utility and a commercial vehicle, was revealed at the Fourth Annual Forum of the American Helicopter Society.

Expanding design problems will plague the industry in its progress to widen greater load-carrying capacity, longer range and improved performance. Despite military and military procurement and growing commercial sales, helicopter prices are rising, rather than falling, due to increasing design complexity and labor and material costs.

The 528 delegates at the forum, held here by Coedre Frank, Inc., Coast Guard, said that use of the heliicopter as the Coast Guard last winter increased the effectiveness of operations by 50 percent. New techniques evolved for aerial helicopter ship rescue teams have increased survival rates almost 20 percent to 90 percent over earlier field work, aerial or surface methods. During a search course at night, a helicopter can find a vessel, the helicopter is able to cover an area of nearly 150 sq. mi. per hour or a total of 175 sq. mi. for the helicopter's time.

► **New Uses**—Dr. Conde Barry Kautz, USN, revealed that the Navy uses heliicopters as standard equipment aboard all carriers and will soon assign them to battleships and cruisers as standard operating craft. Navy has qualified the helicopter as an essential craft for naval operations on polar regions and has found it ideal for such varied assignments as carrier plane guard, water transport, gunnery, gunnery, and delivery and for long range reconnaissance. Rescue of pilots who abandon aircraft in landings have been accomplished in five minutes from the time the plane hit the water until the pilot was back on the deck.

Capt. James Leroy, USAF, revealed that helicopters are now standard equipment in the three Air Rescue Service Squadrons, but believe that they will be replaced by the Sikorski HO4S, which will be the standard helicopter. He believes that a 700 cu. ft. unit of action, a 12,000 ft. speed on altitude and an 800 mph. (and more, six, twelve, and 18) landing gear are immediate requirements for a utility-type utility helicopter.

► **Commercial Operations**—Commercial helicopter operations are expanding as the craft proves its utility in plus it is

increasingly equipped to do, as the opinion of Keith W. Flint, A-F Helicopters, Burbank, Calif. In a paper read by Lon Lawton in the absence of Flint, A-F commercial operations presently include power line patrol, soil drilling, forest fire spraying, fire-fighting and pilot training, in which some 1000 hours of experience with three Bell Model 47 helicopters were accumulated.

Some of the problems of helicopter operations were cited by Jack Rothman, United Air Lines, as an analysis of cost estimates for a proposed air mail pickup service (the "Chango" service), which revealed that more than 40 percent of operating costs are overhead and indirect charges such as longer routes, landing fees, installation of lights in neighborhood landing areas, mail handling, etc., are included.

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► **New Staff Planning**—In the meantime, the Bremer firm, confident of its ability to handle the plan to secure control of C-W and force a special cash dividend of 57 per cent on the common stock, continue with the preparation of the May 7th meeting.

Court May Settle C-W Control Fight

Battle for control of the 3115,000, 60% Curtiss-Wright Corp. is expected to continue this week in court.

A group of stockholders, presently invisible in the present management of Curtiss-Wright, W. Vaughan, filed an action in the Chancery Court of Delaware to sustain an opposition stockholders' committee from reconvening the annual meeting which ended in a dispute last May. W. Vaughan, directed T. Rodan, Bremer, leader of the opposition, to show cause May 5 why his group should not be enjoined from further proceedings.

► **Electric Meeting**—The action followed a two-hour session at the two groups at the stockholders' annual meeting (American Week, April 26).

The meeting was scheduled to start at 11:30 AM at the company's office in Wilmington, Del. Present at the ap-

pearance were some Bremer, his supporters, and a number of C-W officials. President Guy W. Vaughan and his party went late in arriving from New York due to the breakdown of their train.

Bremer, with the aid of his supporters, was elected co-chairman of the meeting due to the absence of Vaughan. AGW official acted as co-chairman and the meeting was adjourned. As Vaughan arrived, he was recognized and invited to conduct the meeting by the C-W co-chairman. Bremer, however, refused to recognize the C-W president and continued under the direction of two agents chairman—leading at emergency sessions with one another. Considerable discussion prevailed around the showing from both sides.

Vaughan appeared Bremer and proceeded with the election of the management staff of 11 directors. Bremer, on the other hand, maintained that as Vaughan was not properly recognized by the action, the election was invalid. Partridge, Bremer, adjutant, in his meeting to May 7 to be announced in the same room. Upon the degradation of clerical of the management data and after an evening a few preliminary questions, Vaughan adjutant his meeting and considered the business of the annual stockholders' meeting completed.

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In a letter to Vaughan, Bremer has "suggested" the C-W president to have all stockholders informed that the annual meeting has occurred for the purpose of informing the stockholders of the election to elect the president Bremer, while opposing two judges and its supporters, has invited Vaughan to appoint two additional inspectors to conduct the election of the president. The letter was enclosed: "By the interests of obtaining a full and fair count of the stockholder vote, I call upon you to cooperate with me and share your own resources to determine the stockholders who appear you."

Despite conflicting claims, no challenged record of the vote has surfaced. It is probable that the election of the president will be completed, the dispute outcome may be determined by a show of power. This process may become rather involved and postponed with possible pressure challenged by both sides.

INDUSTRY OBSERVER

► **Air Materiel Command** is experimenting with the towed helicopter as a means of increasing its range. Air Force anticipates a tactical need for the helicopter to accompany combat aircraft to provide quick rescue service with a helicopter at a use sufficient to ensure a complete basket (over 10 to 15 min). Experiments to date indicate considerable difficulty in towing, possibly providing methods because low power can cause the 300-400 mph air speed of the helicopter.

► **Army Corp.** is developing a special gyro-stabilized deck platform for the use of helicopters aboard ships. The platform is 30 ft x 40 ft and will remain level during rolling of the ship. With power deck rolling more than seven degrees, movement of the cyclic pitch control to roll the helicopter results in total movement of the helicopter as the direction of the roll, leading to extreme difficulty in operating a helicopter from a rolling deck.

► **Cost Guard** is studying the probability of "passive" helicopter design in which the heliport could be carried either externally or internally in a large search plane for airborne landing.

► **Air Materiel Command** is coordinating the design of the "jack," to be used on the Fairchild C-119 "Pack Plane" with its heliport rotor to develop a standard pack for both airborne configurations. Air Force sees an such an unambiguous design the ability to carry the pack from the C-119 loading into one jump closer to the front line with a standard "heavy air lift" helicopter unit attached atop the pack.

► **Nav** has abandoned sonar (VAD) and observation (USC) aircraft instead types for future design in favor of the helicopter. While present Center Seabird will continue to use sonar and helicopter as a search and rescue platform, it will not initiate any further sonar or observation development. Helicopters are now standard equipment aboard all U.S. aircraft carriers.

► **Self-Air** is now investigating a gyro-stabilized motor search which may be quickly forced from a hovering helicopter to the event the land and follow because entangled in heavy rain, obscured or intense wreckage during a rescue operation. Self-Air engineers in Argentina modeled the design of such a situation with the present fixed-wing aircraft in the air.

► **Cost Guard** is experimenting with a method of aversive helicopter landing, in which fixed wing aircraft drop fuel containers by parachute which are retrieved while hovering by the long-distance helicopter. Current problem is an automatic detachable parachute which is fixed in the container is lifted from the water.

► **Air Force** is making helicopters to demand to without accident, which have been previously discussed and accepted, to permit large losses, even on the wreckage of a single helicopter. The operation was discussed as a result of the constant reporting of losses, mostly monthly and even years after the accidents and salvage had been removed.

► **Use of helicopters** operating with Coast Guard are increases in the Coast Guard last winter had returned spending at \$100 million ahead of schedule and increased the effectiveness of the rescuing operation by 50 percent. The helicopter assisted as much as 100 miles ahead of the rescuers and determined the route of transport to the point of destination. The helicopter also performed inspection of isolated groups of ships to determine the most effective route for fueling them.

► **Air Materiel Command** will concentrate its design and development attention on the future on the multi-engine helicopter to provide single engine safety design for long overwater hops. AMC believes that two-engine transmissions, engine reconfiguring and all-weather instrumentation and equipment are immediate helicopter design requirements. AMC has had 17 helicopter design and development projects including cargo and heavy lift "heavy cargo" type. Composite lift trainer blades, of the type now being tested by General Electric Co., will be flight tested in the near future. Jet-powered blades, while heavy, had commoners, provide longer flight operation for "heavy cargo" delivery.

► **Air mail handling** of Los Angeles Army Air Corps has increased from 260,000 per year during its first month to 412,358 pieces the last month reported. LAA has installed two-way HF radio for communication between pilot and post office and is currently testing landing lights and speed light flight instruments to permit full cleanup of ongoing mail after dark.

Crash Landing Set

The Washington State National Guard is experimenting with a crash land set mounted by R. O. Ward, state pilot of Vancouvers, Wash., who conceived the idea while standing by a hot plane in an airfield near Walla Walla.

The set is a small, compact radio in a canvas-pod, fireproof container, which is set off automatically by the impact of a crash. It stops out a continuous signal, causing searchers equipped with radio direction finders and other instruments to plot the exact location of a crashed plane.

AVIATION CALENDAR

May 4—ICAO North Atlantic regional meeting.

May 4—ICAO Technical-Administrative Regional Meeting, Paris.

May 4-4:30—Transportation Planning Conference, Paris.

May 10-11—Aviation Writers Association 11th Annual Convention, New York City.

May 10-11—ICAO Civil Aviation Air Show, Montreal, P.Q.

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ENGINEERING & PRODUCTION

Douglas Hints End of DC-9 Project

Decision influenced by cost, and apparent belief that jet transport is nearer now than originally estimated.

By SKEWER BANGS

Douglas Aircraft Co. has indicated that it has abandoned its DC-9 project, and that close attention is being given to jet transport projects.

At an annual stockholders meeting in Santa Monica, Donald Douglas declared a significant revision of a previous estimate that the jet transport probably is open to two-year delivery.

He said:

"I am convinced now that it is not only a lot easier."

DC-9 Status—While Douglas did not say fully that the long and much-discussed DC-9 is a dead project, this indication was unmistakable in his discussion with stockholders. He said that the company has not advanced the project beyond preliminary design and partial engineering, and that the project of Government business has "put it in the background."

He added that the company has elected not to risk a heavy development cost, which would run close to \$15,000,000, in the face of "uncertain results."

At this point Douglas said that he was influenced to some degree by indications that jet transport is nearer to realization than he once had assumed.

Profit Expected—Stockholders were aware that if present estimates prove correct the company will show a "trident income" of profit for 1968. Also, Douglas said he hoped to continue the company's policy of paying dividends annually and indicated that if they cannot come out of direct earnings they will be paid out of retained earnings. Holders of 1,000,000 shares of Douglas common stock have received dividends averaging 33 per share over the past seven years. A \$2.50 dividend for 1967 was followed by one of \$1.75 paid the past year.

Looking slightly new orders at the time of the meeting, Douglas could not forecast new military gains to result from air group expansion planning in Washington.

However, he did declare that he has urged Secretary of Defense James Forrestal to consider reducing the need for a "balanced air force" by adding military air transports in sufficient quantity

to give air and ground attack groups adequate logistical aid.

Looking Forward—Despite the failure to proceed, Douglas is planning to launch a new jet, still called the DC-9 transport, 33 of which were delivered to the Air Force as long-range transports.

Douglas will present at Santa Monica its DC-6 line for quick production of cargo versions it ordered by the Government.

Douglas informed stockholders that orders new orders are needed the production of passenger DC-6s will start early July 1 with delivery of the 10th airplane. He indicated that present markets for additional DC-6s are limited, but estimated that on a long-term basis his company might receive orders for as many as 100 to 150 units. He said that "with luck" his company might sell an additional five to ten DC-6s to foreign buyers.

Stockholders were given a direct picture of Douglas' improved status of the extent of the company's spare parts business.

He said that in 1967 the company sold \$12,800,000 worth of spare parts for C-54s and C-47s, and that the average sale was only \$12. This would account for 1,800,000 separate orders.

Charles Hart Miller

To Glenn L. Martin

Glenn L. Martin Co. has elected Charles Hart Miller, former general manager of the former Aviation Corp., as vice president-elect. Miller, who has direct all military and commercial line activities, will report to Henry T. Rawland, executive vice president.

A graduate mechanical engineer and former Army Air Force pilot, Miller's career in the aircraft industry started in 1915, when he went to work for Republic Aircraft Corp. He was in business chief pilot and engineering assistant in the company.

When the Republic firm became Republic Aviation Corp. in 1918, Miller was assistant to the president.

While he was associated with Republic, Miller progressed from project engi-

neer to executive vice president and general manager.

He is a member of the Institute of Aeronautical Sciences and the National Aeronautics Association.

In other personnel developments:

► **Charles Hart Miller** of Republic Aviation Corp. has been named as vice president-elect of the company.

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and are usually favorable conclusions. It is maintained that if such participants are desired, these same offers are free to make their purchases in the open market the same as the rest of the public.

Gamble Paying Off?

Increasing business at Bell gives justification to decision to enter aerospace field.

Bell Aircraft Corp.'s delivery of 100 commercial Model 47 helicopters (design 1947) gives a hint that a gamble is paying off.

Feasible to speculate in military aircraft and one of the company's past suppliers of fighting planes during the war, Bell in 1945 made almost a complete break with the past. It set out to establish a future in the aerospace field of commercial helicopters.

The company's annual report, stating that more than 50 percent of its present helicopter backlog represents repeat orders, indicates it has done just that.

James Mower-Bell, another instance of Bell's recent pioneering activities is its "prime mover," a motorized wheelbarrow introduced January, 1945. By Aug. 6, sales amounting to more than \$100,000 were announced by Bell. The first two XH-31s have been delivered and are undergoing further tests.

Bell is continuing in the military field with development of guided missiles and autonomous and guided planes. The first two XH-31s have been delivered and are undergoing further tests.

An order for 70 Model H-11B helicopters has been placed by the Army Cavalry School. Other military work includes the XH-12 and the XH-15, both of which are in their highest stages.

As of Apr. 5, 1948 sales were \$14,000,000. Not lost for the year ending Dec. 31, 1947 amounted to \$1,187,955 on sales of \$14,113,493. Last is attributed to further refinancing and refinancing made necessary by the introduction of the Model 47 helicopter.

Chance Vought Moves Operations To Texas

Shift of Chance Vought Aircraft division, United Aircraft Corp. from Stratford, Conn., to Dallas, Tex., was scheduled to begin last week.

Arrangements with the Navy in connection with the transfer of the Avenger aircraft plant, which now is in production on the F4U-5 Corsair, Tex., until Jan. 1, 1954, with two additional former operations (Avenger West, Dec. 28, 1947).

► Transfer Employees - About 1400

BRIEFING PRODUCTION NEWS

► **Boeing Aircraft Corp.**, Burbank, Calif., has completed arrangements to occupy a new factory building at Coletta, Calif., on property adjacent to Santa Barbara Airport. The facilities have been leased from the City of Santa Barbara on substantially reduced terms for the first three years to assist the company's entry into production of the B-290 twin-engine transport.

► **Texas Engineering and Manufacturing Co.** has received approximately \$1,000,000 in new orders, including engine power assemblies, engines and upper and lower fan for the Fairchild C-124 Packet. T.E.M.C.O. previously produced about 140 similar plans for Fairchild. Other orders include propeller winding machines, screw cone machines and tractor hoods.

► **Continental Motors Corp.** is now in production on a light, portable power plant, the "Moto-Ten," and to drill, sand, grind, polish, etc. Weighing only 50 lb., it produces one and one-half horsepower and can drive cement mixers, pumps, compressors, power shafts, feed graders and saws.

► **Weber Shoveler and Pile Driver Co.'s** research division, Huntington Park, Calif., now claims to be the largest producer of radial gully equipment in the world with current production for the D.C.-10, KLM, Scandinavian Airlines System and PAMA, Argentine airline. Bufile equipment is being used by French Airways, Philippine Airlines, National Airlines and United Air Lines. South is in production for the Lockheed Constellation. Production includes wheel bars, rollers, rollers, and rollers and undercarriages.

► **Beagle Aircraft Corp.'s** Edgemoor division is now flying a North American B-25, two twin-engine B-26s and a Navion in its flight research program an automatic pilot, automatic approach system, attitude gyro, gyro horizon, film gyro compass and similar equipment.

► **Clarks-Wright Corp.'s** aircraft division will close its Columbus plant for two weeks beginning June 21 to accommodate production requirements. The move was delayed following analysis of production problems and is expected to be in the next few months. Employees will receive regular vacation pay during the period.

► **McDowell Manufacturing Co.**, Pittsburgh, announces several improvements in its new model "D" spring designed for light-plane engines. These improvements, including a heavier bearing spacer and a new type main spring, have been tested in both hot and cold weather, and have resulted in reducing service and maintenance costs.

► **Smith Products Division**, South Bend, is now in production on what is believed to be the largest production engine in the world, the Stinson PB-3H. The PB-3H is a 100-hp engine, controlled by eight synchronized throttle valves. The PB-3H is designed for installation on engines up to 5,000 hp.

► **AirPart, Inc.**, distributor of aircraft parts, has opened a New York office at 15 Park Row to facilitate the handling of export orders. AirPart's home office is 723 Socon Ave., Cleveland, Ohio.

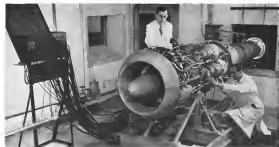
► **Pacific Airmotive Corp.** has been appointed West Coast district representative for the line of hydraulic E-20 regulators and hydraulic measuring devices manufactured by Witec Engineering Co., Evanston, Ill.

employees are being transferred to Texas, and Chance Vought expects to draw approximately 6000 more from the Dallas area. Most of these will be former North American Aviation workers. The Stratford plant currently is employing 8,000.

Personnel training at Dallas will start in June with preliminary operations on the F4U-5 Corsair beginning in July. The Stratford plant, which now is in production on the F4U-5 Corsair, will continue full-scale operations for well over a year. The company states that there will not be a "friction shock" due to the move.

► **Dallas Attractions**—One of the major attractions at Dallas is Hershey Field located near the plant. The field has three runways, one of which is to be lengthened by the City of Dallas to 6000 ft. Five new amusement parks, one is particularly favorable for industry experimental jet planes. Within a 25-mi. radius of the field are five other airports which may be used for emergency landings.

Weather conditions permit good flying 95 percent of the year, with frost not flying possible 14 percent of the time and instrument flying 4 percent of the time.



Avro's Chrono is Canada's initial helicopter. Engine is shown being tested for use on test bed. Constant speed is below 1000 rpm.

Canada Tests First Home-Built Jet Engine

2590-lb. thrust unit is forerunner of larger engine to power Avro fighter plane now being constructed.

First Canadian-designed and built gas turbine engine—the Chrono—was recently tested at A. V. Roe Canada Ltd., Toronto, before top Royal Canadian Air Force, National Defense, and National Research officials.

Design on this development power plant, under construction for the past year, was started by the Canadian government's Turbo Research Ltd. in 1946. Estimated development cost of the engine is about \$1,000,000.

► **Large Engine**—The Turbo-based on the Chrono's performance, a larger engine for the RCAP is now under construction at the Roe plant. This second engine, along with the Aero-designed fighter aircraft it will power, and presently being built, are on the top secret list of the RCAP. However, it is noted that this engine will develop about three times the power of the development Chrono.

► **Chrono's Misstep**—Basically, the Chrono consists of a nine-stage axial flow compressor, an combustion chamber, and a single stage turbine.

► **Compressor** is powered by precision aluminum alloy inlet guide vanes, and discharges air directly into the combustion chamber through six diffusers.

First two stages of rotor blades are stainless steel, the remainder aluminum

alloy. The rotor is supported in a self-aligning and self-centering bearing at the front end, and a duplex-type ball bearing in a self-aligning mounting at the rear.

► **Combustion section** consists of six interconnected straight-through combustion chambers discharging into a bifurcated nozzle box. Each chamber consists of an outer air casing and an inner flame tube.

► **Turbine** rotor comprises an alloy steel disk with integrally casted shaft. Chrono rotor blades bolted to the rim with six-bolt nuts. Cast chrome-nickel alloy guide vanes are used.

Front end of the turbine shaft connects directly to the rear of the compressor rotor through a flexible coupling designed to compensate for angular misalignment.

► **Tail cone** is fabricated from stainless steel with integral cast flange at front and rear. It is mounted by glass wool brackets (encased in silver foil shields) under a short aluminum casing.

► **Fuel system** comprises two variable delivery positive displacement pumps, one flow control valve, pressure regulating valve, and two fuel injectors.

► **Day pump** lubrication system incorporates a multiple type pump consisting of one pressure and two suction

elements. The suction pumps draw oil from the front and rear main bearings, with the center bearing driven by gravity from the rear end.

An oil tank, oil filter and pressure regulator complete the system.

► **Development**—Thrust - The engine weighs 1250 lb., is 52 in. in diameter, 125 in. in overall length, and has a frontal area of 5.9 sq ft.

The Chrono has not yet been tested as a test engine, but is designed to give 2500 lb. thrust at 18,000 rpm, for take-off (2 min. test).

A complete test building has been constructed at the Toronto plant, for all necessary work, with full complement of instruments. In addition to this, there is another test facility at Nubel, Ontario.

► **Jet Transport**—Coming-Soon is also completing a jet-powered passenger transport to cruise at 400 mph. This is to be test flown next winter if present production continues an prototype.

Originally, the transport was to have been powered by two Chrysler-type turboprops, but plans now are to use four Detroit-built Rolls Royce Derwent jet engines.

The craft will seat up to 40 passengers in two double-seat rows, have galleys, two washrooms, and other facilities for passenger comfort.



SINGLE, counterweighted rotor with jets at tip is used by GE to obtain development data on jet helicopter components.



...is blade-shaped rotorcraft. Adjusting steel building houses laboratory equipment, workshop, observation room, and controls and instrumentation.

Jet Blades Tested In Outdoor Pit

General Electric constructs new-type facility to obtain experimental data on jet rotorcraft design features.

A novel jet helicopter testing facility has been placed in operation in General Electric's Thermal Power Systems Division, at the company's flight test center, Schenectady County Airport, New York.

Under an Air Force research and development contract, the installation is intended to produce experimental data on jet-propelled helicopter design features.

Construction Within Hub—The GE phase of the overall Air Force jet helicopter development program covers the design of a test supercritical combustion at the hub, with the hot gases injected along the blade leading edge and issuing from jet nozzles at the tip.

Outdoor Setup—The experimental blade units are tested in an outdoor bowl-shaped pit 150 ft in diameter and 15 ft deep, formed by a simple circular earth wall.

The rotor unit is mounted on a special stand, embedded in concrete

in the center of the pit and is remotely controlled from a 30x50 ft elevated structure used for laboratory and workshop activities.

Only a single test blade is used, the other "blade" being a counterweight arm.

Indoor Setup—The end of the laboratory building adjacent to the pit houses a special observation room with 3-ft concrete walls to shield engineers during test of the full-scale jet helicopter blade.

Efficient Hoisting—A flexible source of power is provided to perform various required functions.

A 1000 hp electric motor is used to drive the blade when the jet-driven tip is not firing, in order to slide along the test setup. The motor is driven by d.c. generators mounted on four surplus Navy diesel power plants.

When the helicopter blade is operating under its own power, the electric motor is used as a generator to measure

the thrust produced by the jet force. These surplus Wright Wheland engines, used in tanks during the war, drive an compressor linked in series to deliver a high mass air flow to an overhead duct extending out to the center of the test rig.

Special provisions have been made for conducting combustor air to the engines and exhaust gases to the air outside the laboratory building.

Control Details—Operation of the facility is centered in a master control panel with levers for engine fuel throttle, blower, air inlet valve, blower start, and so on. Inlet valves on each of the three tank engines.

The control center also contains instrumentation for the jet rotor.

Direct observation of the rotating blade from the panel board is obtained through a series of mirrors.

Program Phase—The development program is divided into two phases. First is preliminary part in a study phase covering installation, performance, and design of various types of power plants, and also the aerodynamic test rig of critical components.

Already substantially complete, this phase includes static tests of various losses and nozzle configurations.

Second phase of the long-range program encompasses the dynamic tests of the burner in the outdoor pit.

In addition, the jet-propelled jet engine to be used in helicopter power plant units will be tested and tested, supplying air to the wheel-turbine blade in the pit, and simulating ultimate operating conditions.

Program is under direction of J. K. Schuyler, project engineer; S. E. Johnson, administrative assistant; J. F. Lake, mechanical design; W. E. Wyman, aerodynamic and thermodynamic analysis; J. E. Peters, combustion development; and G. Winkler, in charge of test facilities.

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The Flying Red Horse!

Twice take-off, climb, cruise, land—carrying passengers—this Flying Horsepower! Developed for the aviation industry by Socoy Vacuum—owner of the Flying Red Horse trademark!

Socoy Vacuum pioneered the Houdry Process of Catalytic Cracking, the TCC Process for continuous reforming, the sensational "Migra-Jet" catalyst—developments which made today's super aviation fuels possible.

With this background of progress in aviation, it's no wonder more U.S. airports display the Flying Red Horse Shell than any trademarks of other oil companies. More than 100 airports already carry Socoy Vacuum products available from coast to coast.

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... to test the safety factor
of this high-pressure fuel pump

When you're taking off in a jet job you just can't let the "Mk" go out in the engine.

That's why Peco engineers have developed a high-pressure fuel pump with two pumping sections, one for the main fuel system and the other for the secondary system that automatically goes into operation . . . just in case! And that's why these same engineers really gave this pump the works in testing it, and fed, into the section side, such surprising materials as brass rod, a steel washer, steel nut, steel screw, lead pellet, brass wire, galvanized wire and other assorted "junk." What happened? All of these materials passed through the pump to the discharge outlet after being cut up by the gear teeth. . . or because of their size and shape, stuck in the section side, being constantly expelled by the gear teeth. Only when pumps were wrapped right around the gear did the gear seize. It was a pretty tough test. But does the Peco High-Pressure Fuel Pump in look for really tough service.

Actually, this latest Peco development is really two pumps in one. There is a common inlet, but two separate discharge and two drive shafts . . . one inside the other. If the main fuel system pump fails, the other automatically goes into action . . . and the all-important fuel continues to reach the engine . . . at the same capacity and same pressure as delivered by the main pump.

Peco High-Pressure Fuel Pumps have been developed for jet engine fuel systems operating at pressures of from 900 to 1,000 p.s.i.

For complete information write: Dept. 52

Peco

PRODUCTS DIVISION
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MANUFACTURERS OF  **SUPERCHARGERS**



Turboprop-powered Aero Athena Mark 1 does not require conversion to fitted RAF all-weather specifications. Jet pipe is on shroud end.

First Turboprop Trainer Nears Completion

Britain's three-place Athena incorporates several novel design features in addition to its new power plant.

The world's first specifically designed jet turboprop engine (Athena-Britain's Aero Athena Mk. 1—will be flying shortly at the company's Waddington air port, near Manchester).

The Athena will be the last to take the air of three new types specially ordered for the radically different Royal Air Force training scheme introduced in 1947. Others are the Percival Provost (designed basic trainer) and the Boulton Paul Balliol advanced trainer.

The Balliol and Athena both were intended for turboprop engines. The Provost started preliminary flight testing with a Bristol Mercury piston engine, but the Athena has been completed as originally planned, with the turboprop.

Engine—Power plant of the Athena is the Armstrong Siddeley Mamba, likely to be the last light turboprop cleared for operational use and quantity production. Present output is about 1050 hp at 1200 r.p.m.; thrust, but this probably will be worked up with development—on this case to around 1500 hp.

Though running in 1946, the engine is still not in production, a reflection on the general difficulties met by engineers with the turboprop and its accessories.

■ All-Weather Equipment—Apart from the new type engine, the Athena has at least two other features which angle it out as a substitute in British aviation training.

First it is more advanced than any previous RAF training jet in category, having all the controls and equipment

found on single engine military aircraft in this respect it approaches to the North American AS531-1.

Full engine gear—Vibration, resonance, identification, basic approach—and complete instrumentation are included to conform to the RAF all-weather specifications, which stipulates that trainers should be capable of operation in all but zero-weather conditions.

This is another step towards the RAF goal of a compact, highly trained air force able to attack and defend against flying conditions.

■ Adjusted Seats—Forward, side-by-side seating is provided for pupil and instructor with a third seat in the rear for another pupil, pupil-instructor or examining instructor. Thereby the aircraft has a number of advantages that many experienced instructors are

taking a conservative view, especially regarding the third seat, which they say is a waste of space and payload.

The Air Ministry is committed to the new layout in that it is going ahead with production of the Provost basic trainer, and have also placed small preliminary orders for the Athena, and possibly the Balliol. A year or so at service use it likely to be the conventional one way or the other.

■ Cowling Details—The Mamba engine cowling is exceptionally clean. The small diameter and sharp drop down from the cockpit give remarkably good visibility.

Now cowling is very close around the propeller spinner and forms a fixed structure as visible to the Mamba's long-nose and compressor.

Apart from the way ring, the entire cowling back to the fuselage is detachable. Top and bottom are two main panels with reinforced edges, forming large and distinct airbrakes for two

ATHENA SPECIFICATIONS

Span	40 ft.
Length	35 ft. 6 in.
Height	11 ft. 6 in.
Wings	12 ft. 6 in.
Overall width	6 ft. 6 in. at wing level
	6 ft. 6 in. at tail level
Empty weight	4000 lb.
Max. loading	5000 lb.
Power loading	100 hp/sq. ft.
Maximum level speed at 10,000 ft.	212 mph
Cruising speed at 10,000 ft.	180 mph
Rate of climb	1000 ft./min. at 10,000 ft.
Speed to 10,000 ft.	5.0 min.
Maximum range at 10,000 ft. (continuous cruising)	1000 mi.
Maximum range at 10,000 ft. (climbing)	175 mi.
Maximum range with 1000 lb. fuel	1000 mi.
Service ceiling	10,000 ft.
Top speed	212 mph



Master installation opened for inspection. Jet engine is ducted under cockpit floor.



Three place layout in Afters cockpit features two 25-G seats. Two nightlights and control panel are provided. Crash pyro is mounted on heavy partition.

folding panels either side. These hinge around and are held open by stay rods for forced inspection access.

Accessibility is a feature of all three new trainers, aimed at a high observation rate per aircraft, so that the maximum of rack cost may be justified economically as well as operationally. **►Master for Interchangeability**—For ease of mounting in a tubular steel or insulated structure, twin fuelage pickup points specially designed to take future interchangeable power rags. Thus, either turboprops or the ultra light class could be fitted with virtually no power plant alterations once all are governed by the Ministry of Supply interchangeability policy.

Another point, British practice is evidenced by the engine access/egression. This is mounted directly in

a unit on the firewall and driven by a single shaft from the engine transmission, easing engine removal and replacement.

►Jet Ducted Starboard—The Master presently gives a direct engine of about 330 lb after the shaft horsepower has been taken from it. This jet is ducted under the cockpit and exhausted on the starboard side of the rear fuselage at an angle of about 30 deg from the centerline.

Jet efflux necessarily all at the engine was not practicable because of the necessity of the structural undercarriage wheels based in the fuselage below the wing root and drag strut cuts through the rear fuselage bottom on a fuel pipe very much in the way of blowing the tail wheel, and front legs and structural completion, re-

spectively. Thus, the starboard exhaust was a logical choice, although minimal.

►In the Cockpit—With fixed seating arranged around the cockpit is laid out "as-is" (fuselage with most of the auxiliary controls—fuel engine, flap and trim, landing gear, brakes, fuel, etc.—on a low control pedestal). Duplicate engine controls are placed in the normal port position for the first pilot.

The dash has a standard blind flying panel in front of the first pilot, engine instruments in the center, and other indicators and switches in front of the second pilot. Amber warning controls are mounted on the console above the engine instruments, flanked by two gyrocompasses.

The port control column has a wheel grip and the starboard one a spoke grip, so that people can get used to the feel of both.

►High G Seats—The Afters unit has one of a new type 25G pattern, specially developed by A. V. Roe with official approval. These are fully adjustable and have great strength and stability. All of the front seats is a heavy mass, some portions of which is mounted in a high steel tube type for aviation crash protection. After this is a lightweight partition, with the third seat to the left, and to the right a space for baggage or extra equipment.

►Cannon Details—Official explains on a good view is apparent from the layout of the canopy section. The wind shield is a very wide and flat, with small side panels. The unit joins attachable canopy, heavily framed, in power-driven or manual back about 4 ft for access to all seats and there is a small front left position to complete the roughly rectangular shape.

►Night Standard—Most interesting canopy feature is the power rotating, rubber-lined front screen for "two-stage" or "one-stage" standard lighting. Normally, not all light beneath the canopy, the screen, slides upwards within the front windshield panel, and small "lower" extend to cover the side panels.

The top front and sliding side portions of the canopy are also locked, and when the pilot from blue tinted goggles he can only see vague outlines outside the cockpit due to the light filter effect of the rubber and blue tint.

At the rear of the cockpit is only blue tinted as seen through the goggles and instruments and controls are easily distinguished. By varying the shade of blue in the goggles, external conditions from dark, through mistlight, to pitch black, can be simulated and all flight maneuvers and instrument being done in broad daylight.

Cabin night lighting is the usual blue, violet and red, with separate controls and intensity, lamp.

►Cockpit Standardization—Although the British probably want the first to

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These G-E ignition transformers are designed specifically for aircraft requirements, and incorporate the benefits of G-E's 25 years' experience in transformer design and construction. They are designed for 400-cycle operation. Their high power factor is obtained by use of a special low-temperature Pyralox capacitor connected across the primary. An improved method of shielding provides unusual freedom from radio interference between 30 kilocycles and 100 megacycles.

G-E aircraft transformers are thoroughly protected against internal corona, moisture penetrating, and corrosion. They give dependable operation at altitudes up to 50,000 feet, and operate within an ambient temperature range of -70°C to 73°C.

These G-E aircraft transformers are made for both single- and twin-ignition, with 70 Va up to 100 Va capacity. Net weight ranges from 4½ to 13 lbs.

IGNITION TRANSFORMERS FOR CABIN HEATERS, WING DE-ICERS are one of the major types of aircraft transformers produced by General Electric. Designed for the efficient operation of radio, motor, power lights, radio heaters, and many other applications, these standard 400 cycle transformers are:

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the part wing, a means for the standard wing, provision for bomb carrier, and photo towing equipment. Finally on production line No. 1, it is due to the lack of production Martin helicopters, and the present order for 20 unit and pre-production A-109 will be filled by MA. If models with 1100 hp Rolls-Royce Merlin Mk. 1.

This version is likely to continue in production until the helicopter becomes available in numbers, but the Merlin-powered MA. 1 will be the first to fly.

Recent air policy statements made during Parliamentary debates on the 1945-49 in estimates indicate that during the next few years the aerial will be on increasing a highly efficient regular "RAF" and in that program, the A-109 will take an increasingly large part.

—Roy Conn

Static Elimination

Engineers propose use of polonium, which emits alpha rays, as solution to problem.

Engineers are considering the use of polonium, emitting alpha particles with strong ionizing effect, as a "cure" for aircraft static problems.

Proposals for that putting this principle to work in aviation have been made to the Aircraft Research and Testing Committee (West Coast) of the Aircraft Industries Association.

Commercial Application—Suggested techniques have been outlined by K. A. Scarb, leading the radioactivity division of Henry N. Smith Co., Los Angeles, western agency of Canadian Radioactive and Uranium Corp. of New York and Gibbs Mfg. and Research Corp., Huntsville, Ala. These organizations market polonium coated metal ion under the trademark "Alphatron" as industrial static eliminators.

Alpha particles Alpha particle solution time on Alphatron static solution unit which, in turn, discharges static loads carried by surfaces over which the ionized air is passed.

In a second demonstration, replacing a standard charged gold foil electrode, showing highly active the surface of an Alphatron toward the electrostatic terminal gave instant neutralization of the static charge.

Use Wavelength—Proposed under preliminary study by ARTC are:

1. Development of Alphatron for air field landing sections and hangars used to maintain constant static neutralization of the second section in flight.
2. Application of Alphatron to plastic radio antenna housings to eliminate localized static causing static noise in reception.

Such factors that an effective application of the Alphatron might be to place small units within static plastic bubbles and circulate air over the device and around the outer surface of the canopy.

While adoption of an AIA research program on the problem will await confirmation, at least one static and one aircraft manufacturer have requested special conferences in the future.

Interest has been strengthened by industrial use of the Alphatron, chiefly for elimination of static in printing plants and in motion picture and radio recording industries.

Other Aviation Use—Another potential use of polonium in aviation has been suggested by Lumsden Industries, Inc., New York, in connection with a recent Civil Aeronautics Administration regulation.

The regulation—No. 273—requires hazardous emergency exit mailings and passenger evacuation suits on all scheduled and non-scheduled passenger aircraft by August 1st, 1948.

The company's polonium hazardous compound is stated to provide a self-sterilizing zone of light of high intensity and weather stability. Unlike other self-sterilizing compounds, polonium is reported to have no penetrating rays, a factor extremely important in its application.

Thus, type of extremely high initial brightness can be produced without danger in storage or handling.

Brazilian Wind Tunnels

Brazil's Aeronautical Commission has ordered \$100,000 worth of electrical equipment from Westinghouse Electric Corp. for two wind tunnels to be built at a new research center in Sao Dos Cristovao.

Two 1600 hp electric motors, one for each of the tunnels, will drive fans capable of producing air currents up to 200 mph. Fan sections of each will be 7 x 10 ft.

According to Dr. A. Azevedo of the Brazilian Aeronautical Commission, both of the tunnels are expected to be in operation by 1950. One will be used for experimental aircraft development and the other for training engineering personnel.

Profit & Loss

Nothing Afloat, Inc. reports net profit of \$189,454, equal to 42 cents per share, for the six months ending Jan. 31.

Republix Aviation Corp. had 1947 loss, after carry-back tax credits, of \$2,609,583 on sales of \$18,280,837.

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Ship: Douglas DC 3
Condition: 400 flying hours. Aluminum surface badly oxidized and streaked.
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For this production run a standard major scheduled airline DC 3 was used, heavily oxidized, covered with dirt, dust and streaked after over 400 flying hours through eastern states and over Cee-Bee A-3 was applied in an engineered cleaning procedure under supervision of a Cee-Bee aviation specialist, by three inexperienced men. The cleaning compound was applied and ignored with long-handled, semi-stiff brushes, in areas of about 6 feet square. Working with low pressure water cleaned the operation.

RESULTS: The aircraft surface was clean, bright and free from streaks. Aluminum was the appearance of new steel. The day was more than satisfactory to the scheduled airline engineers. 5 gallons of material were used. The entire operation consumed only 5 MAN HOURS.

This process and materials has been approved by the laboratories of all scheduled airlines to whom it has been submitted.

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Tokyo Letter

Facilities Future Puzzles Airlines

Coming Japanese peace treaty poses problem of upkeep of navigation, other services now handled by USAF.

By ALPHREDS W. JESSUP

International airlines are beginning to worry about future operation of navigation, communication and weather services in Japan.

Since the end of the war, the U. S. Air Force has maintained these services as well as the airports and instrument landing equipment. To the extent of its ability, it makes them available to commercial airlines. It is doubtful whether international carriers would be operating through Japan if the Air Force had not been assisting here.

The coming peace treaty poses the problem of what happens to these services. The airlines quite obviously cannot bear the expense of maintaining them. They would fly to and over Japan without them.

Alternatives likely to be proposed (1) U. S. Air Force units will remain in Japan for the defense of the country. They will operate as an area of whatever kind control agency is specified by the peace treaty. Probably a United Nations agency will be designated. Most aviation of the Far Eastern Commanders force long lines (maintenance of 38 parts control).

(2) A U. S. civil or military command will be established to supervise Japanese maintenance of the required services. All expenses would be borne by the Japanese government through a section of the Ministry of Communications. While the Japanese have lost the right to fly, there appear few reasons why they should not maintain control of ground services for air carriers or the same way that lightships and shore facilities are provided for ocean shipping.

The last alternative appears most likely. Decentralized Japan will avoid some paralytic force. It is held to speculate that the U. S. Air Force would prefer to be the defense area, and it is certainly the only force available for the task.

An Air Force unit in Japan would surely would require all ground and communications services. It could be

in a position to make these services available to international carriers as it has done so far.

There of course is the possibility that the program would be taken out by the allied powers.

Consequently, plans for the other alternative should be formulated soon. Unless this is done, a sudden withdrawal of U. S. Air Forces after the peace treaty will bring trouble Pacific aviation to a crashing halt.

It would be a shame to see the great contribution that the Air Force has made to international commercial aviation disrupted because of lack of preparedness.

Incidentally, that contribution needs a big boost for the Far East Air Force, which has performed the service of a CAA-CAB and has no direct uncle in the civil aviation.

For one thing, Pan American and Northwest would have to find their investment just to get Pacific routes opened.

FEAF offers emergency service and get it out. It occupies a mission for far landing. It makes no change for weather, communications or even rescue. Furthermore, it faces the problem of its 40,000 man-hours of airway from an all-terrain to a military operation.

As long as large commercial forces across all Japan military traffic will be of greater volume than FEAF is to be in use of the land turned over to the civil use. For instance, Pan American and Northwest are gradually reducing military service with FEAF's blessing.

Changes in the North Pacific airway are coming about June 1. At that time, the Moscow route will open to southern Alaska. Then the Tokyo-Singapore and Chong-Shanghai airway will be discontinued. The north route will run Tokyo-Moscow-Singapore. Through flights also may go Tokyo-Moscow-Shanghai.

When the Moscow port opens, North

west will have no additional stopping stage. This will provide no additional business safety factor for the same machine Alaska log some.

Japan's Overseas Airways is anxious to extend its Hongkong to London (near Rome) flight to Tokyo, but is opposed by Far Eastern Commanders ruling against cabotage rights in Japan.

Operating flying boats, BOAC might cut out its London stop and come into Tokyo Bay if it could afford to install a seafarer. Since this is unlikely, the alternative would be a shuttle flight from London to Hawaii (Tokyo's main mail).

That poses the British problem of where cabotage starts.

Kane is the headquarters of British Commonwealth Occupations Forces but all British trades and businesses must come to Tokyo. This makes some justification for the British plan for permission to transfer passenger lines airplanes to landings at Tokyo.

However, it would be difficult for BOAC the right to bring passengers to two parts of entry in Japan. That is a right which American carriers don't enjoy. They can bring passengers to Tokyo only. Since U. S. headquarters is in Tokyo, they haven't much demand for operations to other ports. But this will prohibit any ruling which will give BOAC cabotage rights.

Indian Line Shopping For Additional Aircraft

Indian Overseas Airlines, Ltd., is increasing its fleet of U. S. aircraft by five additional DC-4s.

Purchase of two of the planes already has been negotiated by J. P. Kassarik, commercial manager, who is in the U. S. working through Indian Corp. The buying the airline's fleet to 13 DC-4s. Kassarik eventually hopes to use DC-4s also.

Routes in addition to a Bombay-Calcutta route. ICA runs from Madras to Nagpur and from Bombay to Lucknow. It is also operating routes to Nairobi on a charter basis. Average seats savings daily totals 5,000 seats. Air travel times, which are held by the Director General of Aviation, amount to 124 per mile.

Lack of equipment and trained personnel has been a retarding factor in the growth of cargo-handling in India. Kassarik reports. ICA does anticipate, however, the development of an air freight department and has extensive plans for its organization in the future.

Officers-Officers of ICA in addition to Kassarik, include M. V. Parthi, general manager; M. V. Menon, operations manager; S. V. Iyer, resident director; and J. M. Atherton, chairman of the board of directors.



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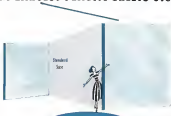
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Letters

Ultimate & Superside

To the Editor:

Your issue of March 27 brought in my attention upon a misleading statement which seems apparently throughout the article in *duffy* in the use of the words "ultimate" and "superside." Though I have no specific evidence to prove the point, I feel sure that all those who have serious to me in terms of the other should come to some agreement as to the definition between these definitions.

The use and study of wind-tunnel velocity frequencies is possible from that enable to the human ear should be referred to a different source. This study is an aspect of velocity gradient that is very local velocity of sound relative to some reference point should be treated separately. The difference is, of course, in that the human ear is very frequently unable to appreciate the same results.

F. A. CLEVELAND
Aerodynamic Engineer
Lockhead Aircraft Corp.
Burbank, Calif.

Wind Shifts & Sails

To the Editor:

In a recent editorial you stated the still learning process was being used in many aircraft. I recently received your equipment but I think we should go a step further and consider why this is necessary for the pilot. The pilot is often in a position to be able to adjust and generally an appreciation in the learning stage.

For many years I have had a theory concerning this and as a matter of fact I am convinced that the average pilot pilot is not taught enough about wind shifts and gusts in late flight. For example, the average light plane has a weight of 1,000 lbs. and a speed of 100 mph. If the wind shifts 10 mph, the aircraft, which normally flies at 40-45 mph, at 60-65 mph. This will have a great effect on the pilot's ability to fly the aircraft. The pilot must be able to adjust to the wind shift and be able to fly the aircraft in a 45 mph gust.

On an aircraft on the desert we have an overhead wind shift at ground level which is 40 mph. If the wind shifts 10 mph, the aircraft will be 10 mph slower than it was at ground level. It is important that you be able to adjust to the wind shift and be able to fly the aircraft in a 45 mph gust.

Before that I had heard we used the pilot in the air at about 75 ft. The pilot must be able to adjust to the wind shift and be able to fly the aircraft in a 45 mph gust. The pilot must be able to adjust to the wind shift and be able to fly the aircraft in a 45 mph gust. The pilot must be able to adjust to the wind shift and be able to fly the aircraft in a 45 mph gust.

When flying through clouds, the pilot must be able to adjust to the wind shift and be able to fly the aircraft in a 45 mph gust. The pilot must be able to adjust to the wind shift and be able to fly the aircraft in a 45 mph gust. The pilot must be able to adjust to the wind shift and be able to fly the aircraft in a 45 mph gust.

stopped being and he crashed from about 40 ft. Fortunately, neither he nor his companion were seriously hurt, due to a large amount of fuselage leaping into the air. The pilot was killed because he did not know the aircraft would have been so high.

As you probably know, pilots and instructors are very close to the still point for "maximum lift." As a result, the aircraft cannot move as fast as the pilot is not willing to let it shift. Therefore, the aircraft is not moving as fast as the pilot is not willing to let it shift. Therefore, the aircraft is not moving as fast as the pilot is not willing to let it shift.

Again the experimental wing pilot is very familiar with these conditions and has not published a general set-down procedure. Upon entering the landing pattern, the speed of the pilot or airplane is increased approximately 15% above the cruise speed. For example, a glider which stalls at 15 mph may be slowed around 40 mph. Therefore, at 50 ft, the pilot must increase the speed to 50 mph. This speed is referred to as the "stall speed" and the pilot is forced to fly at this speed.

We do not advocate this procedure except in emergency. If the air is turbulent to any degree, the student pilot pilot is cautioned to increase his landing speed to at least 50 percent more which would, in the hypothetical case, be 75 mph. If the air is very turbulent, the speed should be further increased and only when landings are made.

As a result of this procedure we have turned into accidents and injuries. There are many pilots who are not familiar with the type of meteorological conditions described above so that when he gets into a problem of the type mentioned above, he is in a bad position.

It happens so frequently that the pilot's main reason is to pull the nose up. This is the wrong thing to do and results in a stall. I would suggest that the following procedure be followed by power pilots when landing an airplane at a low speed. The pilot should be able to fly the aircraft in a 45 mph gust.

A later approach to the field with, possibly, a wind landing. It also would be to fly all pilots to take a little more of the aircraft. The pilot should be able to fly the aircraft in a 45 mph gust. The pilot should be able to fly the aircraft in a 45 mph gust. The pilot should be able to fly the aircraft in a 45 mph gust.

Germany required all transport pilots to take five hours of extra training each year in case of the requirements for emergency landing. The pilot should be able to fly the aircraft in a 45 mph gust. The pilot should be able to fly the aircraft in a 45 mph gust. The pilot should be able to fly the aircraft in a 45 mph gust.

My attention to this type of information, and as thousands of them, is that they are not confident of their own pilotage ability and are not sure of the air. This situation is a threat to the safety of the aircraft and a possible cause of a long wait before making other pilots. The pilot should be able to fly the aircraft in a 45 mph gust. The pilot should be able to fly the aircraft in a 45 mph gust. The pilot should be able to fly the aircraft in a 45 mph gust.

only when he was a few feet off the ground did he attempt to level out. He said he felt the shock of landing and the next moment was in the air again at 75 mph, and he was quite sure that was the ground. He then proceeded on to his last.

Many pilots have been taught that there is no such thing as a down draft close to the ground but they also fail to recognize that there can be a reversal of wind direction which can come up in such conditions as a down draft or a gust. The pilot should be able to fly the aircraft in a 45 mph gust. The pilot should be able to fly the aircraft in a 45 mph gust. The pilot should be able to fly the aircraft in a 45 mph gust.

A relatively new theory and concept toward the glider with the prevailing wind and as a result of upward development was coming out. It was shown that in a low which resulted in a stall. The pilot should be able to fly the aircraft in a 45 mph gust. The pilot should be able to fly the aircraft in a 45 mph gust. The pilot should be able to fly the aircraft in a 45 mph gust.

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CAB Peers Into "Big Five" Future

Analysis of mail rate action shows controversy ahead on Board approach to the problem of permanent rates.

Among key elements in the recent Civil Aeronautics Board mail rate action on the "Big Five" are detailed studies encompassing an analysis of future operating costs.

Forecasting trends in key elements is difficult. It is particularly uncertain in air transportation, where there are so many variable factors on which the qualified decision can exist a major influence.

Regulation of fare usually concerned the detailed projections of the Board can be expected to be continued by the carriers involved if for no other reason than dictating approaches to the outside for the future. As the Board's proposed temporary mail rates for the "Big Five" are presented on its projections of operating costs, it is in this realm that the decisions leading to the setting of permanent rates will be resolved.

► **Long-Range Forecasts**—In estimating future operations, the Board declared that such results are not necessarily expected to be realized in the calendar year 1948, but are believed a reasonable estimate for an appropriate period to be contemplated in establishment of future service mail rates. Despite this disclaimer, the picture may very well belong to the current year.

An increase in passenger rates is expected to average 10 percent for Eastern, Western, Northwest and TWA. United is expected to show a gain of 16.4 percent, presumably because of its Houston operation. Mail rates are also expected to show an average increase of 10 percent on routes except Alaska, which expects a 14.5 percent gain. Flight hour rates are expected to record increases ranging from 11.7 percent for TWA to 12.4 percent for Northwest. It is probable that these estimates are not unchallenged by the carriers.

► **Load Factors**—Considerable controversy, however, may be expected to greet the Board's ideas as to potential savings based on load factors. American Northwest and TWA are expected to average a 70 percent load factor, while 72 percent and Eastern 65 percent. These estimates are based on actual results for the 12 months ended Sept. 16, 1947. Similar estimates for the future may be too high in the opinion

of observers. For example, stronger load factors may develop while present passenger traffic may increase merely because of the availability of more planes and the increased capacities of the new equipment. As the 15 passenger Martin 20-2 and 40 passenger Cessna 340 replace the 21 place DC 3, that decline in load factors may be more evident.

In its present calculations, the Board, for purposes of depreciation, uses a four-year service life for the DC-3 and seven years for the DC-4 and Constellation. Actually, however, Eastern is depreciating its Constellation over a four-year period and it is done in this respect Eastern and Northwest are using a two-year service life on its DC-4 and American three years. United is also in replacing the four-year period.

► **Investment Base Included**—The investment bases of the "Big Five" received careful scrutiny and were mailed down to levels considered essential by the Board to domestic operations. All investments in and advances to affiliates and apparently operating divisions, and funds for the purchase of equipment not reflected in estimates of operations, have been eliminated in this adjustment process. Also excluded was new operating property and equipment, maintenance debt and discounts, deferred development expenses and similar intangibles.

The greatest relative reduction was effected in the accounts of United, as the recognition of about \$75 million of a reported investment of over \$72 million. Much of this disbursement was for the company's investment in LAMSA and such intangibles as the excess value paid for Route 58 over the cost of the tangible assets acquired. While American's investment base was reduced from more than \$114 million to \$72.2 million, more than \$15 million was represented by its interest in American Overseas Airlines in which a return is anticipated from other direct trade. Neither American nor TWA had their investment base virtually, such large because of the allocations made to their foreign operations.

► **Equipment Depreciation**—The evaluation of equipment depreciation funds from all available investment accounts may be

strongly questioned by the carriers affected. The question must probably will be: How can the Board give severe consideration to the benefit of increased earnings flowing from new type equipment without making provision for the business of such planes? The Board may have anticipated this in its statement: "The added income generating characteristics and the lower available low-mile cost characteristics of the new aircraft types should more than offset any margin of loss inherent in our failure to make allowance for the depreciation and capital costs related to such equipment." This provision to be a major point.

Marshaling all factors in play, the Board concluded with its estimate of reasonably attainable operating results for the future period contemplated an estimate of increased and off cost management. The carriers were not bound to be accordingly applied to the "Big Five" with the background. The effect of these rates along with the reconstructed findings of the Board are shown in the following table:

CAB Allowed Investment Base And Anticipated Earnings

Carrier	Allowed Investment (000 counts)	Percent	Anticipated Earnings
American	\$75,258	55.41%	7.63
Eastern	28,975	6.89%	3.11
Northwest	13,177	1.44%	11.87
TWA	34,567	4.59%	11.65
United	35,382	4.77%	5.14

It is evident that Eastern appears to be in the most favored light with an adjusted return of 36.11 percent on the investment. It is interesting to observe that the lowest return appears to show close proximity to the estimated return on the investment.

► **Board Criticism**—Should these estimated earnings actually materialize, they will have varying effect on the operations of the separate companies, particularly in the respect the Board made a serious attempt in computing net earnings. For example, in the case of American, the projected showed an estimated income of \$5,703,000 with a straight 16 percent deduction for income taxes. However, prior to any tax payment, the company can show a tax deduction of \$1,300,000, leaving a net income of \$4,403,000. This reduces the amount available for the equity to \$4,588,000 after a tax payment of only \$2,074,000, making the net \$2,514,000 share for the equity.

In one event, the Board's position appears to be held and emergency attempt to quell out on course of action and provide the carriers with a basic set of conditions which they can consider with facts. —Selig Altschul

AVIATION SALES & SERVICE



Chrysler Super Ace in flight



Airco type showing how accessibility



Lockheed-Super Ace and power: American Skyline



Competition From England

Chrysler Super Ace, new \$7500 four-placer, offers many new features to lure export market away from U. S.

(McGraw Hill World News)

LONDON—New competition in export markets for American private planes is added by the Chrysler Super Ace, 145 hp four-engine new in production at Eastern Airport, Clift Motors, Detroit. Derived from the 190 hp Chrysler Series 1 Air prototype which flew in August, 1946, the Super Ace is designed for air line and executive transport or for light cargo use. It is described as instantly easy to fly, with a simplified wheel control and fuel control arrangement as highlights of the four-place unit.

Prior listed at \$7500 complete with dual controls, blind flying instruments and standard hydraulic landing gear on the four-tricycle landing gear, the plane is likely to offer still competition for men the lowest priced American four-placer, when shipping costs, duty and other

export costs are added to the current \$7500 price.

The lightweight twin tail plane bears direct resemblance in its lines to the present American two-control Skyliner, built by General Aircraft, from a design by Fred Otto Krueger. However, the Super Ace appears to be closer in design. It also has transparent plastic all around the passenger area, for 160 degree visibility.

In first test flights at the No. 1 production Super Ace, Ben Stedman, test pilot, flew it for 50 minutes, then tried to spin it, and reported that the most it would do was a steep spiral turn, which corrected itself with release of the controls. As a final test, he moved into a bank and let the plane fly hands off.

► **Engine**—Prototype Chrysler

Ace was powered with a 125 hp. Leaning engine, with late plans which said to use a new 150 hp. Maxwell British-built engine. However, the Super Ace is now fitted with a 145 hp. Buell-Halligan Gypsy Major X, which has been adapted in the standard power plant.

Five now has a full British construction, more confidence and when carrying two occupants, it is approved for aerobics.

Performance figures quoted include top speed of 135 mph., cruising speed of 115 mph., range of 420 miles with four passengers, on normal fuel supply of 25 gal. A "slipper-type" belly tank which adds 20 gal. more of fuel capacity, increasing range to 770 miles, is designed for easy attachment under load.

► **Taking-Off**—Construction—Construction is unitized, fabric covered, except for landing gear, wings, large side doors, and tail assembly, all of which are metal covered.

The tops of all metal structural components work through 50 deg of deflection without by means of push rods actuated from a screw jack installed internally over the instrument panel.

► **Study**—Universities—Universities, with a wheel track of 6 ft 9 in., for

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Light-weight, strong, Rex-Flex Stainless Steel Flexible ducts offer the dependable solution for ducting which is subject to vibration, expansion and misalignment. Scientifically fabricated by advanced methods, they provide high resistance to fatigue without sacrifice of other required characteristics.

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been considerably strengthened, as a result of a new design, to reduce wear and tear to a minimum. Under full cross-section conditions, but without up to 20 mph) it has been found that it is better to use a few inches of steel than a few inches of rubber. All three are fully certified as being, at least, welded steel tube construction. Shock absorption is by means of rubber cords or springs, which can be replaced in a few minutes without any special tools. Newell's control through 10 deg. and has a very good wheel effectively protects the passenger from jolting. Also, which, when used 17-in. treaded tires, are fitted with Goodyear ply-type hydraulic brakes, which operate differently from the brake pedals, and that ensure passive maneuverability on the ground. A handbrake is also provided for parking, and permits the engine to be revved up without the need for wheel chocks.

► **Dual Controls**—The Super Ace seats are regularly equipped with dual controls, each of these being of the single-wheel and column type with an over-riding foot accelerator. Either of the two control columns can be detached at the rearward limit of movement, and both give full control over steering, throttle and rudder with finger-free move-ments for easier to enter cockpit.

► **Cargo Floor**—The sturdy double panel structure of the passenger compartment in the Super Ace is stressed to take concentrated loads. By removing the seat, and utilizing many luggage compartments, the floor can be converted in a very few minutes into a freighter, capable of holding 600 lb. at height, and with a capacity of 45 cu. ft. wide, and without need make loading easy, as does the fact that only 28 in. above the ground.

► **Other Specifications**—Weight empty, including fuel equipment, is 1944 lb. Allowance 600 lb. for the pilot and three passengers, 180 lb. for 25 gal. of fuel, 51 lb. for 3.5 gal. of oil, and 115 lb. for luggage, the total all-up weight is 2519 lb.

With a wing-span of 36 ft. and a wing-area of 177 sq. ft., wing loading is 14.3 lb. per sq. ft. Length is 21 ft. 6 in., maximum height over wing tips is 7 ft. 2 in. Tailplane span is 5 ft. 17 in.

At full load, the Super Ace climbs at 500 ft. per min., light, it climbs at 1750 ft. per min. Takeoff distance, at loading for a 5 mph wind, is 160 yd. landing run, with the same wind, is 100 yd. This combination makes the plane easy and effective to operate from small fields or landing strips. Service ceiling is 35,000 ft.

Cruising at 115 mph., fuel consumption is 64 gal. per hr. or the equivalent of 18 mi. miles per gal.

Roosevelt Field Reports Salaries

Roosevelt Field, Inc., Hempstead, N. Y., disclosed in its annual report for the fiscal year ended Dec. 31, 1947, that W. D. Guthrie, president, treasurer and director, received a salary of \$15,520 last year.

Two other top executives whose salaries were listed were J. C. Stevens, vice president and secretary, who received \$10,000, and Leslie C. Day, assistant treasurer, \$4,050.

The company has 850,000 authorized shares of \$5 per value common stock of which 100,100 shares are not standing, the report disclosed. The Augusta Corp., New York, owns 60,000 shares or 19.9% per cent of the outstanding stock, Albert C. Lanning, a director of the company, owns 11,800 shares or 39.35 per cent, and Grace Lanning, a director of the company and chairman of the board of directors, owns 15,800 shares or 11.64 per cent.

During the year, according to the report, the company was "almost exclusively" engaged in activities required by the airport services. Since the end of the war it has continued to report and

school operations and conversion to other practices activities.

As of Dec. 31, 1947, the company sold approximately 200 acres of land, a hangar and a runway, including grandstands, which had been under lease to the Old Country Trolley Association, Inc. The company received \$914,800 for the property, \$500,000 in cash and \$750,000 in a five-year (semi-annual) mortgage of 5 per cent interest.

The company retains approximately 250 acres of improved airport facilities together with buildings, hangars, runways, leases, drainage systems and so on.

For the Air Tourist

Two new vacation facilities for the air tourist have been opened in Washington state, with R. Hugh Wadsworth having completed the Winlock Coast Ranch Airport north of Moses and Irwin L. Moore developing an airfield on the Olympic Peninsula.

Moore's airfield will be 1800x600 ft. when completed. Cabins will be built along the Little Quilcove River, bordering the airport, so the pilot may taxi in as very desirable. A full-size recreational area will include golf, swimming, fishing, skiing and scenic trips.



1948 RYAN NAVION

Boundaries and attractive interior finishings of the 1948 Ryan Navion are shown to advantage in the exterior photo of the first plane. Ryan Aircraft Corp. has built up a fleet of new 1948 Ryan Navion in the four ultimate parts jobs offered to make the riding, handling, parking at Sun Shipyard, Col. are on fuel system, exhaust line, nose gear and elevator door, with outstanding styling. Powered by 181 hp. Continental engine, the Navion climbs at 500 ft. per min. Stall speed is 54 mph.





BRIEFING FOR DEALERS & DISTRIBUTORS

Double Wheel Gear Shown on Bellanca

New type of lightweight commercial gear demonstrated at Washington National airport recently by Bellanca Aircraft Corp., under CAA contract, uses tandem dual wheels on each of the main landing gear legs. The only type of tailwheel gear with this feature yet developed in the CAA program, the Bellanca gear assembly inside its steel shroud. Rubber shock cords hold it straight except when sufficient force is put on it to a cross wheel deflection or landing. Then it will flex 30 degrees on either side of center.

The double wheel arrangement was effective in eliminating shaking on the gear, without the use of any other device, in the effect of air turbulence. The smaller wheels are set inboard further into the struts than Bellanca wings, and they give the plane better traction on muddy fields. The experimental model shown was built under a 10 hour contract by one of the employees. Bellanca officials have not yet said what other they plan to put this gear into production for optional equipment. Beneficial it is one of the simplest costing gear. It was actually designed for \$100 by a Hughes school. The experimental design was not made intricate, but that feature could be added with relatively slight changes in the wing wells.

ILS for MacArthur Field

Full commissioning of MacArthur Field Instrument Landing System is expected within two weeks and should then serve the Service, L. I., N. Y., but quite as an alternate airport in the New York area.

The landing system has been in operation for several months, for training, familiarization and check-out tests.

Construction work is planned on the terminal building at MacArthur Field with an eye toward arriving some of New York's commercial air traffic.

MARKING OR NOT—As right as the all-holiday on Wright-Skyway (Skyway No. 1) and the other proposed, contact flying routes for private flyers, their ultimate value depends first of all on whether the aviation people along the route get together and put up some obstacles. After going along with the skyway projects since their beginning last summer, we have concluded that the chances of success and local area groups have been along a realistic amount of "backbone" considering the very little amount of "crust" in the form of members which have been laid so far. If it is up to them within the next few months of the current summer to "put up or shut up."

FLYING TOURISTS—Admittedly there are not yet large numbers of flying tourists to use such aerial skyways. But more than 100 private planes flew into Dayton for the Wright-Skyway dedication ceremony, and 120 to the Washington D. C. convention. Along some Ohio route, City had not yet been opened, but considering the extensive procedure of the "Gulf" City area and the quality of the flying in the plane area, it was probably much greater. Probably there will be well over 1000 private planes flying out various segments of the skyway last year, in spite of CAA's warning that few numbers are available along the route.

DOCTRINE'S PREDICTION—Speaking at the Dayton celebration, Henry Doolittle, Shell Oil Co. president, predicted that the future development of the private airplane would follow a pattern similar to that of the automobile. He attributed the power engine to the private flying boom to an industrial revolution, inadequate equipment and facilities to handle the people who wanted to fly, and lack of ability in personal aircraft. "More certainly, a lack of genuine interest and enthusiasm for flying was not responsible for the decline," Doolittle declared. He went on to predict that private flying's growth will not only continue but will be accelerated and that American engineering could produce an air production base, a safe, dependable family plane, with aerial price and maintenance cost within reach of the average citizen.

REPLACEMENTS NEEDED—Delos W. Reinert, CAA Administrator, said he was the principal speaker at the Washington celebration, pointed out that more than 1000 airplanes which were modified before World War II, had been delivered for seventy centers, and a network which national accounting has not yet uncovered.

WEATHER DRAWBACK—Admittedly the winter weather has been a drawback to local community attempts. A few airlines were put in but fell on the ground because of the September Los Angeles-Washington survey flight. But the next few months will tell the story whether the Wright-Skyway and other skyways are put in a chamber of commerce publicity stunt, or will be of some lasting value to members and not contribute factors to the growth of private flying.

POOR COORDINATION—An apparent lack of coordination between CAA and the private and local committees on exchanging information about progress of the marketing may have something to do with the apparent lack of accomplishment thus far. A Washington Observer City reporter wrote that more than 200 members had been printed on skyways in his state in the past few months, "many of them during Skyway No. 1." Almost immediately a CAA spokesman said that "Ohioans City Committee of members than three or 14 members along Ohio's route of Skyway No. 1, but has not yet organized it." Presumably a lag between printing the members and reporting them for designation on CAA charts is responsible for the discrepancy.

AVIATION'S PART—The various branches of commercial aviation are also in a few cases doing quite a bit of the work for skywaying in their respective communities, but there are more communities where informal knowledge is lacking and no situation are planned. There are few communities so shortlisted that they will fail to put in members if they understand that they are skywaying a route for all tourists which is future years as that traffic grows—will bring many tourist dollars into the community. But unless they have some aggressive, informed leadership for this relatively simple task some of these communities will pass up the opportunity.

NOW OR NEVER—As to the Wright-Skyway, this particular route has had a good member publicity base, but unless full advantage is taken of it at present, within the next few months, the effort is wasted. Before we have any more chance for commercial flight, it would be well to get the point across organized and actively led in some of the money going skyway CAA.

—ALEXANDER MURPHY

AIR TRANSPORT

End in Sight for Freight Rate War

Independent freight carriers backed in CAB's floor under tariffs and examiner's support of forwarders.

By CHARLES ADAMS

The end of the current rate war in the airfreight industry apparently is in sight. CAB, in a tentative decision, has set a floor under freight charges. The Board's move was dramatically supported by the outcasted airlines but apparently supported by the larger independent airlines.

Freight Forwarder Case—Another hint for the unaffiliated cargo lines, and probably for the whole industry, came with the decision on freight rates. A CAB examiner came out strongly for granting freight forwarders

the right to operate as air transporters.

In the majority opinion on freight rates, CAB Chairman Joseph J. O'Connor, Jr., and Member John L. Smith and Board member James H. Smith all agreed that the current rate war was a "disastrous" situation. The Board's decision was a "disastrous" situation. The Board's decision was a "disastrous" situation.

Rates Too Low—The Board's decision, printed in its weekly publication of freight rates, indicates that present charges do not compensate the carriers either for their current costs or

for lower costs that might be attainable. CAB then presented estimates of 16 cents a ton mile for the last 1000 ton miles in any one shipment and 13 cents for all ton miles in excess of 1000 in any one shipment. In the past, freight rates on an un-confirmed basis have ranged down below eight cents a ton mile, while maximum charges by the certificated carriers went below 15 cents a ton mile. CAB's policy cannot, naturally, suggest the Board to set an industry-wide maximum rate of 16 cents a ton mile for shipments up to 1000 lbs., 14 cents a ton mile for shipments above 1000 lbs. and 13 cents a ton mile for shipments above 1600 lbs. (Aviation Week, Apr. 16)

Competition Made—CAB found that the rates of certificated carriers are lower than those of unaffiliated lines for shipments in weight categories constituting a large proportion of total freight traffic.

"This situation, together with a general level of rates below cost, eventually would lead to the financial inability of the certificated carriers to remain in operation," the Board asserted. It added that while the carriers' freedom to exploit the potentialities of airfreight should be protected to the fullest extent, the destructive aspects inherent in present and proposed tariffs debate the taking of more effective regulatory action.

Valuable Experience—CAB emphasized the importance of finding out whether a specified airfreight industry can be developed into a viable industry. The Board said it recognized the value of this experiment but found when it granted unaffiliated cargo lines the right to operate as common carriers under the Section 202 of the Civil Aeronautics Act. "It is our opinion that to encourage the experiment now by permitting undue competitive pressure to drive down rates would be contrary to the public interest."

The Board still rejected the "cost" theory of rates (certificated airlines which contended that freight carried in the usual space on passenger flights is an added cost to the airline service and flight personnel and equipment would be there anyway. Passengers were cited to show that not only the independent but American Airlines, United Air Lines and TWA, among others, had money on freight last year.

Don Golden—"It is one conclusion," CAB declared, "that the costs of the unaffiliated cargo carriers are the most realistic guide in determining the reasonableness of the rates under consideration." In the third quarter of 1947, the Board found that freight costs averaged about 11 cents per available ton mile and showed 16 cents on the basis of

Ranking of "Big Five" Airlines

CAB, in its recent decision affecting the nation's five largest domestic carriers and their respective unaffiliated cargo lines, has classified American Airlines, East Coast Air Lines, Northwest Airlines, TWA and United Air Lines as unaffiliated operators. The Board said these companies have created

a situation where self-sufficiency is reasonably attainable under honest, unconfined and efficient management without more than a "service" and pay rate from the government. Ranking of the "Big Five" according to favorable operating characteristics is shown in following table.

	American	East Coast	Northwest	TWA	United
I Size and Volume Factors					
Total revenue last year	3	4	5	2	1
Revenue in operation	2	3	4	5	1
II Density and Fleet Utilization Factors					
Revenue per ton mile per month	3	4	5	2	1
Revenue per ton mile per station per day	3	4	5	2	1
Average daily average cargo	3	4	5	2	1
Revenue per station	3	4	5	2	1
Fleet load factor	3	4	5	2	1
III Operational Factors					
Average length of passenger trip	3	4	5	2	1
Average length of freight trip	3	4	5	2	1
Performance factor	3	4	5	2	1
Passenger yield per ton mile	3	4	5	2	1
IV Mail Volume and Density Factors					
Mail ton miles	3	4	5	2	1
% mail to total revenue	3	4	5	2	1
Mail ton miles per station per day	3	4	5	2	1
% mail ton miles per station per day	3	4	5	2	1

Based on Estimated Operating Characteristics for January 1947

equipment load factors. But expenses have risen considerably since that period.

CAR emphasized that the *doing of ground maintenance tasks cannot occur profitably*. The Board felt the current demand to work out and adjust their site structures above the site floor act.

Need for Pompano-Modesto, in his report on the federal transportation, CAR executive J. Earl Cox declared extensive *preference for* not direct costs in air transportation. He and the board have proved that work is not in transportation.

Cox and those in no doubt that air freight forwarders already have handled substantial volumes of business despite doubts as to the logic of their operations. Some forwarders had stated they turned down large amounts of traffic because of their uncertain status under the Civil Aeronautics Act.

The executive report stated that the public interest in, and need for the amount of air freight forwarders was established by statistics representing major business organizations, associations of commerce and the armed services. The Airline Association confirmed the need for air freight carriers, stating that air forwarders would be able to top up the national cargo potential with their large shipping organizations.

Opposition Strong-Certified overseas air carriers represent the resistance of forwarders into air transportation. They cited evils in the operation of forwarders in further transportation, adding that when this cooperative ground service organization, Air Cargo Inc., is fully activated the services of neither the forwarders nor Airline Cargo Agency will be necessary.

Cox said that even if Air Cargo, Inc., accomplishes the goal it has established for itself it will still fall short of meeting the services now performed by REA and which will be affected by forwarders.

Recommendations Made-The cases are recommended that CAR issue an emergency order requiring ground forwarders, including those who surface carrier affiliations, to engage in air transportation. He urged that Railways Express Agency be prevented to continue operations under existing authority until authorizing it to use the facilities of certificated cargo carriers as well as those of the certificated airlines.

Cox and the Board should deny REA's request to engage in the work of air freight as an indirect carrier, "once it appears desirable to announce the distinction between air express and air freight." He recommended that CAR issue an order requiring all Congress to provide for issuance of permits to authorize forwarders without a showing of public convenience and necessity.



Newark Airport's present layout.

\$50 Million Face-Lifting at Newark

New York Port Authority takes over field and plans seven-year improvement project to increase capacity.

By STANLEY L. COLBERT

Newark Airport is scheduled for a \$20,000,000 face-lifting by the Port of New York Authority.

The Port Authority took over Newark on May 22, and plans to add 400 acres to the existing 1,600 acres. They will provide another 300 acres for hangars, shops, and buildings for residences, overhead storage and cargo handling. Time allowed by the Authority to complete the project is six years.

Parallel Runways-Plans for the terminal, which will serve 35-40 percent of all passengers in the New Jersey-New York region (which have an 75 million potential air travelers) include construction of an open parallel, dual runway system. Approximate capacity under this system 10,000 aircraft movements a year, or 120 aircraft leaving a peak hour.

See Newark, but in parallel pass will, according to the Port Authority, permit "simultaneous landings and takeoffs without any danger of conflict with traffic pattern."

Runways will range in length from 6,000-8,000 ft and will be capable of handling 125,000-150,000 ft aircraft. Not only, of course, in addition to stranding operations, will be an increase in flight efficiency.

Non-Flight Runways-Not used flight routes will be given attention by the Port Authority.

Following the pattern set at La Guardia Field for tapping other and passenger revenue (Airlines Week, May 22), the Authority will give special consideration to facilities in this trade. Preliminary plans will include the construction of an extensive two-level terminal to contain shipping services, aviation facilities and retail shops.

The Authority points out that at La Guardia, which spread attention to reduced facilities has been given, a situation is that revenues from this source in 1948 will rise to \$235,000. The 1946 figure was reported to be \$112,000.

But Steps-Two being of last and was the first step taken by the Authority before embarking on the overall program. This will aid in determining damage methods and proper locations for the various facilities. During the construction, service will continue at the field.

Other developments:

- The Authority has authorized purchase of equipment and other equipment for the field amounting to \$15,100,000. This is in addition to \$114,000,000 worth of equipment on hand which was purchased for use at Field Bennett Field and which will be transferred to Newark.

- Foreign Army buildings at the field will be integrated with the overall plan. Within five to six months, construction will begin on general all-purpose hangars for the field.

- Range area adjacent to the terminal will be increased, to provide more space space as well as for passenger comfort.

Addition at Newark Authority to the Port of New York Authority's division of municipal airports (which are La Guardia Field and New York's latest national airport) was integrated by the Newark City Commissioners, who in 1947 acquired the Authority's plan of a study of the airport necessary to develop the air terminal. In July, 1948, the proposal for financing, developing and operating Newark was submitted to the City of Newark, and on Oct. 23, 1947, the City and the Authority entered into a 35-year leasehold agreement. The agreement became effective May 22, 1947.



IALPA delegates leave 16-nation meet in London to form the new organization.

Air Line Pilots Go International

New 16-nation organization formed to push aims for operating standards and achieve benefits for pilots.

An International Federation of Air Line Pilots' Associations was formed last month at a conference in London attended by delegates from 16 nations.

Represented were pilots from Argentina, Australia, Belgium, Canada, Czechoslovakia, Denmark, Hong Kong, New Zealand, Norway, Sweden, South Africa, Switzerland, The Netherlands, Great Britain and the United States. Representatives for U. S. pilots was Howard B. Cox, American Airlines, who was the delegate of the Air Line Pilots Association (ALPA).

Aims Listed-Objectives of IALPA: to establish methods of communication between the pilots' associations as members of national interests; to ensure that some of the current standards are made available to the appropriate international authority; and to establish a permanent organization through which pilots may be advised on current at London employment, pilot personnel, security, hours of service, and conditions operating and weather standards.

The group agreed that the flight crew should not be subject to interference from ground sources. "Unauthorized and excessive of a plane in flight should always remain in the hands of the pilot and complete control of the plane should be in the cockpit," a resolution declared.

Weather Minimums-It was decided that the country in which the airports are situated should, in conjunction with all concerned parties and pilot associations, be responsible for specifying weather minimums for each air available at each field. The minimums specified would be applicable to all operations.

When these minimums have been determined, it would be the responsibility of each operator to lay down its own minimums for observance by its pilots, but these company minimums would in no case be less than the established minimums of the particular air industry's minimums. But he said the early receipt of this year's minimums that "unless pilot selection of underlying airline policies are fixed, the results for 1949 also may be disappointing."

ICAO Participation - IALPA also agreed that a request should be made to the International Civil Aviation Organization for the right of representation at ICAO's meetings.

An informal association of federation was agreed by representatives of the pilots' associations at the London meeting, and arrangements made for a session in Paris next September. Rules and regulations for IALPA may be adopted at that time. Meanwhile, an advisory committee will headquarters in London.

Increased Airline Lift

U. S. certificated airlines now are able to make available to the military more than ten times the emergency carrying capacity they offered at the beginning of World War II, according to the Air Transport Association.

In 1941, the scheduled airline fleet, both domestic and overseas, had an emergency military transport potential of 14,000,000 lbs. miles per month. Current potential is around 35,000,000 lbs. miles monthly, based on a 100 percent load factor and a 25 percent increase in the only form of plane efficiency. Translated into passenger loads, the present potential is 1,315,000,000 per month.

Significance of the 112 percent increase in emergency carrying capacity of the U. S. airline fleet is emphasized by the fact that of practically all other civil as well as military elements of national security and defense during the postwar period, AIA (which is a part of the 141 airline planes in 1941 was in DC-1, while the current fleet includes such larger planes as the Constellation, DC-6, DC-4 and Martin 3-0-2.

TWA Views Future

TWA's top officials believe the air transport industry's worst crisis is the postwar period and just said that the future need not be black if the industry and the government have learned the lessons of their mistakes.

Speaking at Baltimore late last month, TWA Board Chairman William Lee Paxon stated that "confusion and shambles" of the last two years are at an end. He said the principal reason for the financial setbacks suffered by U. S. air carriers in the postwar period were spending costs, rather than management planning and control on the part of regulating agencies and the failure of basic government policies.

Meanwhile, TWA President LaMotte T. Coker, addressing the Society of Aerospace Engineers in New York, spoke with Paxon on the costs of the industry's recovery. But he said the early receipt of this year's minimums that "unless pilot selection of underlying airline policies are fixed, the results for 1949 also may be disappointing."

Pan American Favored

Pan American Airways has been recommended for a new route between Boston and Bermuda in preference to Northwest Airlines and Colonial Airlines, which also have applied for the line. CAB Executive William F. Cason, indicated Pan American can operate the Boston-Bermuda route more economically than either NWA or Colonial because the service can be more easily integrated with PAN's present operations. Pan American now flies between New York and Bermuda.

Cason declined the granting of a Boston-Bermuda route to either Colonial or Northwest would add either carrier in advancing economic self-sufficiency. Colonial is now flying to Bermuda from New York and Washington.

DC-4s To Aerovias Guest

Aerovias Guest, S.A., authorized Mexican flag carrier, has added two DC-4s to its Mexico City-Madrid service, supplementing its present Constellation. The new equipment was obtained from United Air Lines.

Expansible Industry or Mothball Fleet?

In considering *severals* of the air power controversy which has been raging on Capitol Hill, there are two principal yardsticks to measure the effectiveness of various measures proposed.

One is the size and quality of the air force in being. The other is the use and quality of the aircraft means for expanding industry to sustain the air force in the field.

Neither can be isolated from the other. Together they are the basic ingredients of airpower and the keystone in the national defense structure.

The Air Force has consistently maintained that its minimum peacetime personnel requirements include a 70-Group regular air force of 6690 first line combat planes backed by an 8000 plane force of reserves, national guard units and storage pools. Avoiding technical obsolescence is insured by an annual procurement rate of 3200 new aircraft, which would provide a new complement of planes every five years.

Unfortunately, only the aggressor can plan the starting date of a war. So it is impossible for us to avoid risk in deciding now whether to build more B-50's during the next two years or to gamble on belting the range position in jet planes during the next five years, and concentrate our procurement goals on that objective.

We must keep building an adequate force of the best planes currently available. It is admittedly an expensive process but it is the single cost of national life insurance. Any other course is openly courting disaster.

In the arguments between the Truman administration and the Congressional air power advocates, thus more obvious yardstick has frequently been applied. We have heard less of the second important requirement—industrial capacity.

It is in this respect that the Truman administration's proposals have met consistently ground realities. Last year it was the President himself who asked military air power requests by more than 50 percent.

Now Mr. Foran's latest compromise proposal is to allow the Air Force to build up to 46 Groups. On the surface this seems an attractive offer, probably not far enough short of the 70-Group goal to be worth arguing about.

However, Foran's proposal to accomplish the build-up without any additional procurement funds over those he had previously recommended. It would be done by taking some 300 odd B-29's out of storage and re-equipping them for active service.

Congressional critics of the Foran's proposal have scored him of offering a mothball air force, and in a

sense they are right. For building up numerically acceptable quantities of aircraft is meaningless unless the proper industrial base is provided to support a consistent production of technically modern aircraft during peace time and to assure rapid expansion to mass production in war.

All three groups that have explored this problem for the government during the past year—the Air Coordinating Committee, the Fletcher Commission and the Congressional Air Policy Board—have agreed on the necessity for this industrial base. Yet the Truman Foran bill leaves proposals continually ignored it by attempting, first, to pass through Congress an omnibus aircraft procurement bill for short of the real requirements, and then by proposing to substitute a fleet of bombers fresh from mothballs instead of the production line.

The industrial requirements of airpower have been clearly stated—perhaps most specifically by the Air Coordinating Committee, which called for an annual production rate of 3000 planes or 30,000,000 airplane lbs. as the minimum peacetime floor for the aircraft industry, and an annual production of 5700 planes with airplane weight of 60,000,000 lbs. for periods of international emergency when the prospect of war looms.

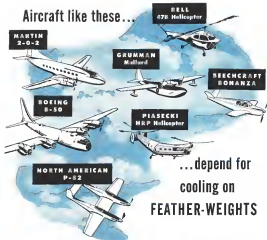
The Truman administration has been expending its tremendous effort to impress on the citizens the dangers in the present international situation and yet this same administration actively opposes any attempt to boost our air power to the minimum peacetime requirements set by its own expert advisers.

The Air Coordinating Committee will shortly publish a new and technically detailed study on responsibility of the aircraft industry and the peacetime requirements for its healthy survival. It is a tragedy that this study is not available now while the fate of airpower is being determined, so that the neglected issue of the industrial requirements of adequate air power can be guaranteed squarely to the man who will make that decision.

But it is unacceptable that the Senate will be deceived by the administration's belated offer of a huge Air Force increased by obsolete planes. We hope they will stand firm with their colleagues of the House who, by a voting 145 to 3 vote, endorsed the principle that as power is now the key to our national defense, and that it must rest on the two foundations of a relatively small but well trained and equipped regular air force backed by a healthy and technically sound aircraft industry.

Without both the future of this country is in serious jeopardy.

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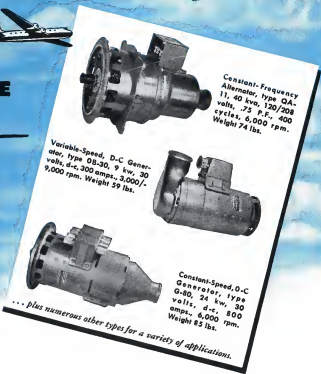


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